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Application No. : 2,552,833
Owner : JMS CO., LTD.
**Title : HEAT EXCHANGER, METHOD FOR MANUFACTURING THE
SAME, AND HEART-LUNG MACHINE**
Classification : F28F 9/02 (2006.01)
Your File No. : 73466-129
Examiner : Andrew Davidson

YOU ARE HEREBY NOTIFIED OF :

- A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SUBSECTION 30(2) OF THE *PATENT RULES*;
- A REQUISITION BY THE EXAMINER IN ACCORDANCE WITH SECTION 29 OF THE *PATENT RULES*.

IN ORDER TO AVOID **MULTIPLE ABANDONMENTS** UNDER PARAGRAPH 73(1)(A) OF THE *PATENT ACT*, A WRITTEN REPLY TO EACH REQUISITION MUST BE RECEIVED WITHIN **6 MONTHS** AFTER THE ABOVE DATE.

This application has been examined taking into account the:

Description, as originally filed; 
Claims, as originally filed;
Drawings, pages 4/11 and 6/11, as received on July 7, 2006 during the national phase; and
pages 1/11-3/11, 5/11 and 7/11-11/11 as originally filed.

The number of claims in this application is 11.

The examiner has identified the following defects in the application:

A search of the prior art has revealed the following:

References Applied:

United States Patent

4972902
4480683

Nov. 27, 1990
Nov. 6, 1984

Ninomiya
Wollbeck et al.

Canada

OPIC  CIPO

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Ninomiya discloses a triple-wall tube heat exchanger.

Wollbeck et al. disclose a hollow fibre heat exchanger.

Claim 1 does not comply with paragraph 28.2(1)(b) of the *Patent Act*. Ninomiya disclosed the claimed subject matter before the claim date.

Ninomiya discloses a heat exchanger that has a housing, parallel tubes, first and second sealing members (14 and 20), a third sealing member (16, 18), a gap between the first and third sealing member (24, 28), and second outlets (48) connected to the gap. Claim 1 is so broad that it reads on Ninomiya.

Claims 2-4 do not comply with section 28.3 of the *Patent Act*. The subject matter of these claims would have been obvious on the claim date to a person skilled in the art or science to which they pertain having regard to Ninomiya in view of Wollbeck et al.

Wollbeck et al. disclose a second fluid flow path that is columnar, inlets and outlets formed in a round shape, and mouths of the flow path that are matched with the inlet and outlet, and cross-sectional centres of three neighbouring tubes form an equilateral triangle (figs. 6 and 8). The fluid and that the heat exchanger is adapted to form part of a heart-lung machine are not considered patentable features. It would have been obvious to incorporate the features known from Wollbeck et al. into the heat exchanger of Ninomiya to arrive at the heat exchanger recited by claims 2-4.

Claim 11 fails to recite any additional technical features that could lend patentability to claims 1-4.

Claims 5-10 appear to recite a novel heat exchanger manufacturing method. The applicant should ensure in amending that the *device* and *method* claims contain the same inventive concept to avoid an objection to unity of invention.

In view of the foregoing defects, the applicant is requisitioned, under subsection 30(2) of the *Patent Rules*, to amend the application in order to comply with the *Patent Act* and the *Patent Rules* or to provide arguments as to why the application does comply.

Section 29 of the Patent Rules requisition

Under section 29 of the *Patent Rules*, the applicant is requisitioned to provide:

- identification of any prior art cited in respect of the United States Patent and Trademark Office application describing the same invention on behalf of the applicant or on behalf of any other person claiming under an inventor named in the present application, and the patent number, if granted, subsequent to the International Search Report under paragraph 29(1)(a) of the *Patent Rules*.

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To satisfy this requisition, applicant should provide all the preceding information or documents, or provide in accordance with subsection 29(3) of the *Patent Rules* a statement of reasons why any information or document is not available or known.

Andrew Davidson
Patent Examiner
819-953-4505
252833A.doc